

[C A S E S E R I E S]

Synergistic Combination of an In-office Procedure and Home Regimen for the Treatment of Facial Hyperpigmentation

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ABSTRACT

Hyperpigmentation disorders, such as melasma and solar lentigines, pose a significant treatment challenge for most patients. Combining a series of in-office procedures, such as chemical peels and light- and laser-based treatments, with maintenance therapies have been shown to provide greater efficacy than one treatment alone. However, receiving multiple in-office procedures may be cost prohibitive for patients. A series of eight case studies were conducted to evaluate the efficacy and tolerability of a novel treatment regimen combining one in-office superficial chemical peel procedure followed by a 12-week topical maintenance program consisting of micro-entrapped 4% hydroquinone, tri-retinol, and sunscreen with sun protection factor (SPF) 30+. Patients presented with Fitzpatrick skin types II and III and mild-to-moderate solar lentigines and/or melasma on their facial skin. Physician-graded overall improvement in hyperpigmentation, standardized photography, and patient satisfaction were evaluated at Weeks 4, 8, and 12. At Week 12, all eight patients demonstrated improvements of at least 25 percent in overall facial hyperpigmentation, with six of the patients demonstrating a 50- or 75-percent overall improvement. One hundred percent of the patients rated their experience with the novel treatment regimen as “excellent” or “good” reflecting high patient satisfaction. Standardized photographs also support the physician and patient findings. Results from these case studies demonstrate that this unique treatment regimen combining one in-office procedure followed by 12 weeks of topical maintenance therapy, may provide an effective, simple, and cost-effective option for patients with facial hyperpigmentation. (*J Clin Aesthet Dermatol.* 2012;5(4):33–35.)

Hyperpigmentation disorders, such as melasma and solar lentigines, pose a significant treatment challenge for most patients. Success is often facilitated by a combination of therapies.^{1–3} As several cutaneous pathways may contribute to hyperpigmentation, topical therapies can work at various points in the sequence of pigment production. A treatment regimen, rather than a single treatment type, is becoming more common in the armamentarium of therapies for hyperpigmentation. In-office procedures, such as chemical peels, lasers, and light-based therapies, focus on the removal of hyperpigmented lesions and have been established as effective treatments.^{4–7} The combination of in-office procedures and maintenance therapies has been shown to provide greater efficacy than

either treatment alone.^{1–3} Finally to prevent pigment recurrence, patient compliance and basic measures of sun avoidance (especially peak mid-day sun), sun protection (including a broad-spectrum sunscreen, frequent re-application, and sun-protective clothing), and maintenance use of topical pigment corrective therapies, are all important aspects to include in a successful treatment regimen.

Since receiving multiple in-office procedures is quite cost prohibitive for most patients, a novel hyperpigmentation treatment regimen was developed incorporating one in-office procedure followed by a topical maintenance regimen. The components of the regimen were selected to provide the patient with a simple yet effective therapy combination. A series of case studies were

DISCLOSURE: Dr. Cohen has served as a consultant and clinical trial participant for SkinMedica. Ms. Makino and Drs. Sonti and Mehta are paid employees of SkinMedica, Inc. Financial support of this study was provided by SkinMedica, Inc.

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Figure 1. Physician's Global Improvement assessment scores for all eight patients, where a grade of 0=no change or worsening, 1=25% overall improvement, 2=50% overall improvement, 3=75% overall improvement, and 4=95% or better overall improvement



Figure 2. A 62-year-old female patient with Fitzpatrick skin type II presenting with solar lentigines at baseline and after 12 weeks of treatment. Photos courtesy of Joel L. Cohen, MD, Englewood, Colorado.

conducted to determine the efficacy and tolerability of combining an in-office superficial chemical peel procedure (containing a proprietary blend of resorcinol, lactic acid, salicylic acid, and retinoic acid) with a topical home regimen of micro-entrapped 4% hydroquinone, tri-retinol, and sunscreen SPF30+.

CASE SERIES

Methods. Seven female patients and one male patient between the ages of 25 to 63 years, with Fitzpatrick skin types II or III are presented herein. At baseline, each patient manifested mild-to-moderate facial solar lentigines and/or melasma. Four patients presented with a combination of melasma and solar lentigines due to a history of pregnancy, oral contraceptives, and/or sun exposure, and the remaining four patients presented with solar lentigines due to a history of sun exposure. The combination facial treatment included one in-office superficial chemical peel followed by a 12-week topical home regimen of micro-entrapped 4% hydroquinone (applied twice-daily), tri-retinol (applied in the evenings, once-daily), and sunscreen SPF30. Immediately post-peel, patients were advised to apply sunscreen SPF30 and a basic moisturizer on their facial skin as needed during the peeling process. Two to three days after the peel procedure, patients initiated topical therapy with micro-entrapped 4% hydroquinone and tri-retinol. Patients returned to the office at Weeks 4, 8, and 12 for physician grading of overall improvement in facial hyperpigmentation and standardized digital photography. At each visit, patients were also asked about their satisfaction with the treatment program.

Results. All patients demonstrated at least a 25-percent overall improvement in facial hyperpigmentation after 12 weeks of treatment, as shown by physician grading presented in Figure 1. Additionally, 6 of the 8 patients showed an overall improvement of 50 to 75

percent in their facial hyperpigmentation, including all patients presenting with solar lentigines and half of the patients with combination melasma and solar lentigines. Patient satisfaction with the combination in-office and home regimen was high with 100 percent of patients rating their experience as "excellent" or "good." The usage convenience of the combination treatment regimen was also highly rated by patients, with the majority (7 out of 8 patients) selecting "strongly agree" or "agree," when asked if the regimen was convenient to use as part of their daily skin-care regimen. Standardized photography of patients presented in Figures 2 to 4 support the improvements observed by both the physician and patient. The treatment regimen was well-tolerated with no treatment-related adverse events.

DISCUSSION

These case studies demonstrate that the synergistic combination of one in-office procedure followed by a home-maintenance regimen can provide an effective and well-tolerated hyperpigmentation treatment program for some patients. The regimen is simple and incorporates a multi-modal approach, including the use of a single mild chemical peel procedure plus maintenance topical hydroquinone and retinoids, which have been established as effective treatment options for hyperpigmentation.⁸⁻¹³

In addition, the regimen allows the physician to involve the patients, keeping the patients motivated by including them as active co-participants. A collaborative approach involving the patient in the treatment plan has been recognized as an ideal model for patient adherence¹⁴ and is particularly important with sun-protection playing a central role. With only three products needed for home maintenance (hydroquinone, retinoid, and sunscreen), the regimen also provides a convenient and easy-to-use regimen that may further support patient compliance, which is essential for treatment efficacy.¹⁵



Figure 3. A 53-year-old female patient with Fitzpatrick skin type II presenting with melasma and solar lentigines at baseline and after 12 weeks of treatment. Photos courtesy of Joel L. Cohen, MD, Englewood, Colorado.



Figure 4. A 36-year-old female patient with Fitzpatrick skin type II presenting with melasma and solar lentigines at baseline and after 12 weeks of treatment. Photos courtesy of Joel L. Cohen, MD, Englewood, Colorado.

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